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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/667,003 | 09/21/2000 | Woong Sik Choi | 2658-191P | 8781 |

2292 7590 06/27/2005

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| EXAMINER |
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NGUYEN, JENNIFER T

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| ART UNIT | PAPER NUMBER |
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2674

DATE MAILED: 06/27/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/667,003

Applicant(s)

CHOI ET AL.

Examiner

Jennifer T. Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on RCE filed on 4/22/05.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-28 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. This Office action is responsive to Request to Continued Examination filed on 04/22/05.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over APA (Admitted Prior Art) Fig. 2 in view of Troxell (U.S. Patent No. 5,177,406).

Regarding claims 1, 10, 20, 25, and 27, APA Fig. 2 discloses an electro-luminescence display device, comprising:

- a first pixel cell (R) displaying a first color;
- a second pixel cell (G) displaying a second color;
- a first driving circuit (T2 driving pixel R) receiving a first driving voltage (L1) and applying a first driving current to the first pixel cell based on the first driving voltage; and
- a second driving circuit (T2 driving pixel G) receiving a second driving voltage (L2) and applying a second driving current to the second pixel cell based on the second driving voltage,

wherein: the first and second driving voltages are equal (supported specification page 2, line 16 to page 3 line 2).

APA Fig. 2 differs from claims 1, 10, 20, 25, and 27 in that it does not specifically disclose the first and second driving currents are determined based on an electrical characteristic of an electro-luminescence diode provided in each of the first and second pixels, respectively,

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whereby the first and second pixel cells are independently driven. However, Troxell teaches by varying the width of the channel of the first and second of the driving circuits, the on-current which flows through the pixels can be varied, independent of the addressing conditions (col. 10, lines 24-58, Fig. 5). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the determining of the first and second driving currents as taught by Troxell in the system of APA Fig. 2 in order to provide the driving circuit have a geometry which can be tailored to optimally match the on-current flow from the pixel with the performance of that particular pixel.

Regarding claims 2, 3, 11, the combination of APA Fig. 2 and Troxell teaches the first driving circuit and the second driving circuit have a different structure (col. 11, lines 11-45 of Troxell).

Regarding claims 4-9, 17-19, 21-24, the combination of APA Fig. 2 and Troxell teaches the first pixel cell is a R pixel cell and the second pixel cell is a B pixel cell, and the first ratio is greater than the second ratio (col. 11, lines 11-45 of Troxell).

Regarding claims 12-15, the combination of APA Fig. 2 and Troxell further teaches a third driving circuit comprises a third transistor having a third channel width and a third channel length, the third channel width to the third channel length forming a third ratio, the first second and third ratios being different, respectively (col. 11, lines 11-45 of Troxell).

Regarding claims 16, 26 and 28, APA Fig. 2 discloses an electro-luminescence display device, comprising: a first driving circuit (T2 driving pixel R) including a first transistor having a terminal thereof connected to a power supply line (L1), said first transistor having a first channel

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width and a first channel length (not shown), the first channel width to the first channel length forming a first ratio; and

a second driving circuit (T2 driving pixel G) including a second transistor having a terminal thereof connected to a power supply line (L2), said second transistor having a second channel width and a second channel length (not shown), the second channel width to the second channel length forming a second ratio (supported specification page 2, line 16 to page 3 line 2).

APA Fig. 2 differs from claim 16, 26 and 28 in that it does not specifically disclose the first ratio being different from the second ratio and the first and second ratios being determined based on an electrical characteristic of an electro-luminescence diode, the electro-luminescence diode being provided in each of the first and the second pixels. However, Troxell teaches by varying the width of the channel of the first and second of the driving circuits, the on-current which flows through the pixels can be varied, independent of the addressing conditions (col. 10, lines 24-58, Fig. 5). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the determining of the first and second driving currents as taught by Troxell in the system of APA Fig. 2 in order to provide the driving circuit have a geometry which can be tailored to optimally match the on-current flow from the pixel with the performance of that particular pixel.

4. Applicant's arguments with respect to claims 1-28 have been considered but are moot in view of the new ground(s) of rejection.

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Conclusion


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jennifer T. Nguyen whose telephone number is 571-272-7696.

The examiner can normally be reached on Mon-Fri: 9:00am-5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick N. Edouard can be reached on 571-272-7603. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Jennifer Nguyen
06/15/05


REGINA LIANG
PRIMARY EXAMINER